

CLAIM SET AS AMENDED:

1. (Currently Amended) Method A method for measurement of water content of a liquid, ~~in which method a property of the liquid is measured electrically for one parameter, comprising the steps of:~~

~~—the properties of the liquid are measured at least substantially simultaneously also by another electrical method, whereby the electrically measuring properties of the liquid are measured using both by a relative-value measurement method in order to determine a relative water content of the liquid; and~~

~~electrically measuring the properties of the liquid by an absolute-value measurement method in order to determine resulting in the measurement of the liquid for its a dielectric coefficient and relative water content of the liquid.~~

~~characterized in that~~

~~-wherein said measurement is measurements are repeated at two different temperatures in a-se rapid succession so that the water content of the liquid may be assumed to stay at least stays substantially constant.~~

2. (Currently Amended) The method according to claim 1, ~~e h a r a c t e r i z e d in that the wherein a temperature dependence of the dielectric coefficient of an entirely dry liquid is determined by measuring essentially simultaneously the $E_r(\epsilon_r)$ and the temperature of the liquid at at least two temperatures,~~

wherein $(\epsilon_r) = (\epsilon_0) + F(ppm)$,

wherein (ϵ_0) = dielectric coefficient of entirely dry liquid, and F(ppm) = a function dependent on the water content.

3. (Currently Amended) Method The method according to claim 1, characterized in that wherein said relative water content measurement is carried out using a capacitive sensor.

4. (Currently Amended) Method The method according to claim 1, characterized in that wherein changes in the results of water content measurement measurements due to aging of the liquid are compensated for by virtue of using only the most recent data of the a measurement history for the compensation for changes in the a response of the measurement system.

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5. (Currently Amended) Method The method according to claim 1, characterized in that the wherein aging of said liquid, advantageously oil, is indicated on the a basis of changes in the value of the dielectric coefficient of entirely dry liquid (ϵ_0).

6. (Currently Amended) Method The method according to claim 1, characterized in that wherein, in the measurement of step of measuring the relative water content, an auxiliary medium is used for absorbing thereto the water contained in the liquid under measurement being measured.

7. (Currently Amended) Method The method according to claim 5, ~~characterized~~
~~in that~~ wherein said auxiliary medium is a thin-film polymer layer.

8. (Currently Amended) Method The method according to claim 5, ~~characterized~~
~~in that~~ wherein the water content of said auxiliary medium is determined by way of
measuring its dielectric coefficient.

9. (Currently Amended) Apparatus An apparatus for ~~measurement of the~~
measuring water content of a liquid, said apparatus comprising:

~~one first~~ electrical sensor means (5, 6 or 1, 6) for measuring a first parameter of
the water content of ~~a the~~ liquid, ~~which apparatus includes;~~ and

—~~a second~~ electrical sensor means (1, 6 or 5, 6) for measuring a second parameter of
the water content of a liquid, ~~said second sensor means (1, 6 or 5, 6) measuring a~~
~~different parameter than that measured by~~ ~~said first electrical sensor means (5, 6~~
~~or 1, 6),~~ ~~said sensor means being such that one of them measures the~~ measuring
properties of the liquid by a relative-value measurement method, and ~~the other~~ the other
said second electrical sensor means measuring the properties of the liquid by an
absolute-value measurement method, whereby one ~~the second~~ sensor means (5, 6)
is sensitive to changes in the dielectric coefficient, and ~~the other~~ first sensor means
is sensitive to the relative water content,

~~characterized in that~~

wherein the first sensor means adapted for measuring the relative water content
contain contains an auxiliary medium capable of absorbing water contained in the liquid
under measurement being measured.

10. (Currently Amended) Apparatus The apparatus according to claim 9, ~~e-h-a-r-a-e~~
~~t-e-r-i-z-e-d i-n t-h-a-t w-h-e-r-e-i-n s-a-i-d s-e-c-o-n-d s-e-s-o-r m-e-a-n-s (5, 6)~~ sensitive to changes in
dielectric coefficient is formed by two interdigitated finger electrodes (5, 6).

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11. (Currently Amended) Apparatus The apparatus according to claim 9,
~~characterized i-n t-h-a-t w-h-e-r-e-i-n o-n-e e-l-e-c-t-r-o-d-e (6) o-f t-h-e s-e-s-o-r p-a-i-r t-w-o i-n-t-e-r-d-i-g-i-t-a-t-e-d f-i-n-g-e-r~~
~~e-l-e-c-t-r-o-d-e-s o-f t-h-e s-e-c-o-n-d s-e-s-o-r m-e-a-n-s~~ adapted to perform the measurement of dielectric
coefficient also forms a part of ~~t-h-e a-~~ measurement electrode pair (1,6) o-f t-h-e f-i-r-s-t s-e-s-o-r
m-e-a-n-s adapted to perform the measurement of the relative water content.

12. (Currently Amended) Apparatus The apparatus according to claim 9, ~~e-h-a-r-a-e~~
~~t-e-r-i-z-e-d i-n t-h-a-t w-h-e-r-e-i-n t-h-e s-e-c-o-n-d s-e-s-o-r m-e-a-n-s s-e-s-i-t-i-v-e t-o c-h-a-n-g-e-s i-n t-h-e d-i-e-l-e-c-t-r-i-c~~
coefficient is formed by a coaxial structure, wherein one electrode is formed by a center
pin and ~~t-h-e a-j-a-c-e-t h-a-s h-a-v-i-n-g~~ a net-like structure ~~a-n-d i-s, t-h-e o-n-e e-l-e-c-t-r-o-d-e b-e-i-n-g~~
permeable to water.

13. (Currently Amended) Apparatus The apparatus according to claim 12, ~~e-h-a-r-a-e~~
~~t-e-r-i-z-e-d i-n t-h-a-t w-h-e-r-e-i-n s-a-i-d a-u-x-i-l-i-a-r-y m-e-d-i-u-m i-s a t-h-i-n-f-i-l-m p-o-l-y-m-e-r l-a-y-e-r.~~

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14. (Currently Amended) Apparatus The apparatus according to claim 12,
~~characterized in that~~ wherein the apparatus contains means adapted to measure the
dielectric coefficient of said auxiliary medium whereupon the relative water content of
said auxiliary medium can be determined.
